

WHAT IS CLAIMED IS:

- 1 1. A computer program product, encoded in computer readable media, the
2 computer program product for designing an integrated circuit chip, comprising:
3 a first set of instructions, executable on a computer system, the first set of
4 instructions configured to model an input/output cell located on the
5 perimeter of an integrated circuit, the model of the input/output cell
6 further comprising:
7 a model of a main cell; and
8 a model of a pre-cell; and
9 a second set of instructions, executable on a computer system, the second set
10 of instructions configured to model a cover wherein the cover prevents
11 an area occupied by the pre-cell from being used for any other purpose
12 in the model.

- 1 2. The computer program product as recited in claim 1, further comprising:
2 a third set of instructions, executable on a computer system, the third set of
3 instructions configured to adjust the timing of the main-cell and pre-cell,
4 wherein the timing adjustment to the main cell and pre-cell approximates the
5 timing of a input/output cell.

- 1 3. The computer program product as recited in claim 1, wherein the first cover is
2 used to cover a first pre-cell, further comprising:
3 a second pre-cell, wherein a single input/out put cell is modeled with a main-
4 cell, a first pre-cell and a second pre-cell, wherein the first cover
5 prevents use of the area of the first pre-cell and the second cover
6 prevents use of the area covered by the second pre-cell.

- 1 4. The computer program product as recited in claim 1, the computer program
2 product further comprising:
3 a database, wherein the database stores a netlist.

1 5. The computer program product as recited in claim 1, the computer program
2 product further comprising:
3 a third set of instructions, the third set of instructions configured to convert a netlist to
4 a proprietary format.

1 6. The computer program product as recited in claim 1, further comprising:
2 a third set of instructions, the third set of instructions configured to flatten a netlist by
3 reading a description of the function of a cell and listing each function of the
4 cell individually, wherein reading a description of the function of a cell and
5 listing each function of the cell individually.

1 7. The computer program product as recited in claim 1, further comprising:
2 a third set of instructions, the set of instructions configured to identify the location of
3 each pin in an integrated circuit.

1 8. The computer program product as recited in claim 1, further comprising:
2 a third set of instructions, the third set of instructions configured to identify the
3 location of each cell in an integrated circuit.

1 9. A method of designing an integrated circuit, the method to model an
2 input/output cell in a location on the perimeter of the integrated circuit and a location in the
3 core area of the integrated circuit, the method comprising:
4 modeling an input/output cell located on the perimeter of an integrated circuit,
5 wherein modeling the input/output cell further comprises:
6 modeling a main cell; and
7 modeling a pre-cell; and
8 modeling a cover wherein the cover prevents an area designated to occupied
9 by the model of the pre-cell from being used for any other purpose in
10 the model.

1 10. An integrated circuit manufactured by the method as recited in claim 9.

11. The method as recited in claim 9, further comprising:
adjusting the timing of the main-cell and pre-cell, adjusting the timing of the main cell
and the pre-cell approximates the timing of a input/output cell.

12. The method as recited in claim 9, further comprising:
modeling the input/output cell with a main-cell, a first pre-cell and a second pre-cell,
wherein the first cover prevents use of the area of the first pre-cell and the
second cover prevents use of the area covered by the second pre-cell.

13. The method as recited in claim 9, further comprising:
storing a netlist.

14. The method as recited in claim 9, further comprising:
converting a netlist to a proprietary format.

15. The method as recited in claim 9, further comprising:
listing each function of a cell individually.

16. The method as recited in claim 9, further comprising:
identifying the location of each pin in an integrated circuit.

17. The method as recited in claim 9, further comprising:
identifying the location of each cell in an integrated circuit.

18. A computer system, comprising:
a memory; and
a central processing unit, wherein the central processing unit is designed with
the assistance of a computer program, the computer program encoded
in computer readable media, the computer program product
comprising:

a first set of instructions, stored in said memory, configured to model an input/output cell located on the perimeter of an integrated circuit; the model of the input/output cell further comprising:
a model of a main cell; and
a model of a first pre-cell; and
a second set of instructions, stored in the memory, configured to model a cover wherein the cover prevents the area occupied by the first pre-cell from being used for any other purpose in the model.

19. The computer system as recited in claim 18, further comprising:
a third set of instructions, executable on a computer system configured to adjust the timing of the main-cell and pre-cell, wherein the timing adjustment to the main cell and first pre-cell approximates the timing of a input/output cell.

20. The computer system as recited in claim 18, further comprising:
a third set of instructions, executable on a computer system configured to:
model a second pre-cell and model a second cover, wherein the first cover prevents use of the area of the first pre-cell and the second cover prevents use of the area covered by the second pre-cell.

21. The computer system as recited in claim 18, further comprising:
a database, wherein the database stores a netlist.

22. The computer system as recited in claim 18, further comprising:
a third set of instructions, the third set of instructions configured to convert a netlist to a proprietary format.

23. The computer system as recited in claim 18, further comprising:
a third set of instructions, the third set of instructions configured to read a description of the function of a cell and list each function of the cell individually, wherein reading a description of the function of a cell and listing each function of the cell individually is referred to as flattening a netlist.